

Family Ophiopleuridæ.

Genus OPHIOPLEURA, Dan. & K. 1877.

1. *Ophiopleura borealis*, Dan. & K.2. *Ophiopleura arctica*, Duncan.

I have to express my thanks to the Rev. A. M. Norman, F.L.S., for sending me the "Separat-Aftryk" and for drawing my attention to the identity of *Ophiopleura* and *Lütkenia*.

August 9, 1878.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

March 20th, 1878.—Henry Clifton Sorby, Esq., F.R.S.,
President, in the Chair.

The following communications were read:—

1. "Note on an Os articulare, presumably that of *Iguanodon Mantelli*." By J. W. Hulke, Esq., F.R.S., F.G.S.

In this paper the author described what he believed to be the os articulare of *Iguanodon Mantelli*, from the best specimen of a series of five collected by the Rev. W. Fox, of Brixton, in the Isle of Wight. He remarked that the mandible represented by this bone differs greatly from that of the Crocodilia, and in a less degree from that of extant Lizards, while in some respects it resembles that of *Hypsilophodon Foxii*. From this resemblance and the relative abundance of the bone in the same beds which have yielded mandibular rami of *Iguanodon*, he felt justified in referring the bone to the latter Saurian.

2. "Description of a new Fish from the Lower Chalk of Dover." By E. Tulley Newton, Esq., F.G.S.

The author referred to his previous descriptions of fishes from British Cretaceous rocks belonging to Prof. Cope's genera *Portheus* and *Ichthyodectes*, and stated that he had since obtained a form referable to the allied genus *Daptinus*. The specimen is in the collection of the British Museum, and was procured from the Grey Chalk of Dover by Mr. Gardner. It consists of the head and some vertebræ, the characters of which are described in detail by the author, who stated that in some characters, especially the degree of flattening of the teeth, the fish seems to stand between *Ichthyodectes* and *Daptinus*, and hence proposed to name it *Daptinus intermedius*. The author further noticed the existence in the British Museum of a right maxillary bone from the Lower Chalk of Dover, which he thinks may indicate a second species of the same genus.

3. "Further Remarks on Adherent Carboniferous Productidæ." By R. Etheridge, jun., Esq., F.G.S.

The author stated that since the reading of his former paper on this subject (Q. J. G. S. vol. xxxii. p. 454) his *Productus complectens* had been found in various localities, as in Northumberland, in Fifeshire, and near Dalry, in Ayrshire. The last-mentioned may be a distinct species. He further described two specimens of adherent Productidæ (one from Scremerston quarry, Northumberland, near Berwick, and one from Kinghorn, in Fifeshire) the characters presented by which led him to refer them to the genus *Chonetes*.

4. "The Submarine Forest at the Alt Mouth." By T. Mellard Reade, Esq., F.G.S.

The right of the remains of trees on the shore at Great Crosby, in Lancashire, to be regarded as representing a submerged forest having been called in question, the author desired to place on record the results of an investigation which, he thought, would dispose of all doubts on the subject. On cutting a trench through 1 foot of peat and 14 inches of clay round one of the stumps, which had an oak-trunk lying by it, apparently in the position in which it had fallen, the observers saw that roots were cut through all round, running along near the surface of the clay, or penetrating it diagonally: while rootlets and tap roots descended vertically into the clay. Several of the main roots were traced for a considerable distance into the clay. On raising the stump out of the ground, the clay showed numerous root-sections. The examination of the stumps gave confirmatory results.

April 17th, 1878.—Henry Clifton Sorby, Esq., F.R.S.,
President, in the Chair.

The following communication was read:—

"On the Palæontological Results of the recent Polar Expedition under Admiral Sir George Nares, K.C.B., F.R.S." By Capt. H. W. Feilden, R.A., F.G.S., and Robert Etheridge, Esq., F.R.S., F.G.S.

In this communication the authors brought before the Society the palæontological results and details of the collection made by the naturalists and other officers of the late expedition to the Arctic Circle under Admiral Sir G. Nares. The purpose of the paper was to record the presence of Silurian and Carboniferous fossils in the highest latitude yet reached, 82° 45' N. Of the former group 60 species have been determined, ranging from the Lower to the Upper Silurian, both Llandeilo and Wenlock types being present and numerous—notably, in the class Heteropoda, two species of the genus *Maclurea*, and *Bellerophon*, with *Strophodonta* and *Raphistoma*, &c., also the genus *Receptaculites*. Upper-Silurian species of Actinozoa belonging to *Halysites*, *Favosites*, *Heliolites*, *Favistella*, *Zaphrentis*,

Amplexus, *Cyathophyllum*, and *Arachnophyllum* were noticed, and correlated with British forms when possible; but, on the whole, the facies of the Cœlenterata is American rather than European. Amongst the Crustacea five genera were noticed:—*Bronteus*, *Calymene*, *Encrinurus*, and *Proëtus*, all Upper Silurian; and the genus *Asaphus*, associated with *Maclurea*, of Lower Silurian age. Ten species of Brachiopoda, belonging to the genera *Pentamerus*, *Rhynchonella*, *Chonetes*, *Atrypa*, *Strophomena*, have been determined.

Collections were made from twenty localities, ranging from lat. $79^{\circ} 34'$ to $82^{\circ} 40'$ N., notably the highest, at Cape Joseph Henry, where Capt. Feilden obtained a numerous Carboniferous-limestone fauna, numbering about thirty species, chiefly Brachiopoda and Polyzoa, all determined species, and American in character rather than British. Mr. Etheridge believed he had determined, through certain forms of Brachiopoda, the presence in a ravine at Dana Bay of the Devonian rock below the Carboniferous Limestone south of Cape Joseph Henry and Feilden Isthmus, the want of plant-remains preventing any correlation with the Ursa stage of Heer. It cannot now be doubted that an extensive Silurian fauna extends to, and is present from lat. 79° to lat. 82° N., illustrating both the lower and upper divisions of this group of rocks, especially the equivalents of our Wenlock series. Again, north of these there sets in a clearly defined Carboniferous-Limestone fauna, reaching the extremity of the highest latitude we know, and probably striking away beneath the Polar sea to Spitzbergen, where the same species have been described by Toula. The authors, through certain fossils, then endeavoured to show that on the whole the facies of the Polar palæozoic fauna was more nearly allied to that of America than to that of Europe, and thus must be correlated with it, although it was shown that a large number of species are common to the two areas, especially the British Islands. The absence of Lamellibranchiata in rocks older than the Tertiary was noticed as having special interest in the physical history of the Polar seas in Palæozoic and Mesozoic times. None have ever been detected in these rocks. The authors stated that they had sought also for evidence of Trias and Permian fossils in this and other collections made, but there appeared to be none. They also discussed the question of the deposition and extension of the Lias as represented at Eglinton Island and Spitzbergen. The authors furnished a Table showing the distribution of all the species collected by the expedition from twenty localities.

MISCELLANEOUS.

Probable Distribution of a Spider by the Trade-Winds.

REV. H. C. M'COOK states that the *Sarotes venatorius*, Linn., a large laterigrade spider of the ballooning kind, occurs, according to specimens in his private collection, from Santa Cruz, Virgin Isles,